



1643

#8

PATENT  
Docket No. 2283/301  
**RECEIVED**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

JAN 10 2001

Applicant : Leivan DeVeylder et al

)

Examiner:

TECH CENTER 1600/2900

Serial No. : 09/574,735

)

Art Unit:  
1643

Filed : May 18, 2000

)

For : CYCLIN-DEPENDENT KINASE INHIBITORS  
AND USES THEREOF

)

**INFORMATION DISCLOSURE STATEMENT**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

In accordance with 37 C.F.R. §§ 1.97 and 1.98, it is requested that the following disclosures, which are also listed on the attached Form PTO-1449, be made of record in the above-identified case.

1. Burssens S., et al. (1998) "The cell cycle in *Arabidopsis*", *Plant Physiol. Biochem* 36(1-2): 9-19.
2. Burssens S., et al. (1998) "Identification of novel cell cycle genes in *Arabidopsis thaliana*", current abstract *Plant Science and Biotechnology in Agriculture* 36.
3. Chen, J., et al. (1996) "Cyclin-Binding Motifs Are Essential For The Function Of p21<sup>CIP1</sup>", *Molecular and Cellular Biology* 16(9): 4673-4682.
4. de Almedia Engler, J., et al. (1999) "Molecular Markers And Cell Cycle Inhibitors Show The Importance Of Cell Cycle Progression In Nematode-Induced Galls And Syncytia", *Plant Cell* 11: 793-808.
5. Doerner, P., et al. (April 11, 1996) "Control of root growth and development by cyclin expression", *Nature* 380: 520-523.

6. Doonan, J. (1996) "Plant Growth: Roots In The Cell Cycle", *Current Biology* 6(7): 788-789.

RECEIVED

7. Forsburg, Susan L. (2000) "Themes and variations: the First Salk Institute Cell Cycle Meeting, 18-22 June 1999", *Biochimica et Biophysica Acta* 1470: R13-R16.

JAN 10 2001

8. Fountain, M.D. (November 27, 1997) "Chenopodium rubrum G1 cyclin-dependent kinase inhibitor mRNA, complete cds", EMBL Accession No. AJ002173.

TECH CENTER 1600/290c

9. Hemerly A.S., et al. (1999) "Cell Cycle Control And Plant Morphogenesis: Is There An Essential Link?" *Bioessays* 21: 29-37.

10. Hemerly, A., et al., (December 1993) "cdc2a Expression in Arabidopsis is Linked with Competence for Cell Division", *The Plant Cell* 5: 1711-1723.

11. Hemerly et al. (1995) "Dominant Negative Mutants of the CDC2 Kinase Uncouple Cell Division From Iterative Plant Development", *Embo Journal* 14(16): 3925-3936.

12. Hinds, Phil (1999) "The cell cycle Cold Spring Harbor, 20-24 May 1998", *Biochimica et Biophysica Act* 1423: R63-R67.

13. Huntley, Rachel P., et al. (1999) "The Plant Cell Cycle", *Plant Biology* 2: 447-453.

14. Inze, D., et al. (1999) "Trends In Plant Cell Cycle Research", *Plant Cell* 11(1): 1-4.

15. Jacqmard, A., et al. (1999) "Expression Of CKS1At In *Arabidopsis thaliana* Indicates A Role For The Protein In Both The Mitotic And The Endoreduplication Cycle", *Planta* 207: 496-504.

16. LaBaer, J., et al. (1997) "New Functional Activities For The p21 Family of CDK Inhibitors", *Genes & Development* 11: 847-862.

17. Lui, H., et al. (2000) "The Arabidopsis Cdc2a-Interacting Protein ICK2 Is Structurally Related To ICK1 and is a potent inhibitor of cyclin-dependent kinase activity in vitro", *Plant Journal* 21(4): 379-385.

18. Mironov, V., et al. (1999) "Cyclin-Dependent Kinases And Cell Division In Plants-The Nexus", *Plant Cell*. 11: 509-522.

19. Nakamura Y. (April 14, 1998) "Arabidopsis thaliana genomic DNA, chromosome 5, TAC clone:K24G6" EMBL Accession No. AB012242.
20. Nakayama, K., et al. (1998) "Cip/Kip Cyclin-Dependent Kinase Inhibitors: Brakes Of The Cell Cycle Engine During Development", *Bioessays* 20: 1020-1029.
21. Niebel, A., et al. (1996) "Induction of cdc2a and cyc1At Expression in *Arabidopsis thaliana* During Early Phases of Nematode-Induced Feeding Cell Formation", *Plant Journal* 10(6): 1037-1043.
22. Planchais, S. (1997) "Roscovitine, a novel cyclin-dependent kinase inhibitor, characterizes restriction point and G2/M transition in tobacco By-2 cell suspension", *The Plant Journal* 12(1): 191-202.
23. Pyke, K, et al. (1999) "Cellular Differentiation and Leaf Morphogenesis in *Arabdopsis*", *Critical Reviews in Plant Sciences* 18(4): 527-546.
24. Reed, S. I. (1996) "G1/S Regulatory Mechanisms From Yeast To Man", *Prog. Cell Cycle Res.* 2: 15-27.
25. Veylder De, et al. (1997) "The Arabidopsis CKS1 At Protein Binds The Cyclin-Dependent Kinases CDC2AAT and CDC2BAT", *Febs Letters* 412: 446-452.
26. Wang, H., et al. (1997) "A Plant Cyclin-Dependent Kinase Inhibitor Gene", *Nature* 386: 451-452.
27. Wang, H., et al. (1998) "ICK1, A Cyclin-Dependent Protein Kinase Inhibitor From *Arabidopsis thaliana* Interacts With Both Cdc2a and CycD3, And Its Expression Is Induced By Abscisic Acid", *Plant Journal* 15(4): 501-510.
28. Wang H., et al. (1997) "Arabidopsis thaliana cyclin-dependent kinase inhibitor protein (ICK1) mRNA, complete cds", EMBL Accession No. U94772, April 29, 1997.
29. International PCT Application No. WO 99/64599, to Agriculture and Agrifood Canada, published December 16, 1999.
30. International PCT Application No. W099/14331, to CropDesign N.V., published March 25, 1999.
31. International PCT Application No. WO 97 26327, to Fred Hutchinson Cancer Research Center, published July 24, 1997.

32. International PCT Application No. WO 00/60087, to E. I. Du Pont De Nemours and Company, published October 12, 2000.

33. International PCT Application No. WO 96 31534 A, to Sloan Kettering Cancer Institute, published October 10, 1996.

34. International PCT Application No. WO 92 09685 A, to University of Australia, published June 11, 1992.

35. International PCT Application No. WO 97 26327 A, to Fred Hutchinson Cancer Research Center, published July 24, 1997.

36. International PCT Application No. WO 97 20842 A, to Centre National De La Recherche Scientifique, published October 10, 1996.

37. International PCT Application No. WO 97 16447 A, to Mitotix, Inc., published May 9, 1997.

38. International PCT Application No. WO 93 15213 A, to Zeneca Limited, published August 5, 1993.

39. U.S. Patent No. 5,750,862 to Peter C. L. John, et al., issued May 12, 1998.

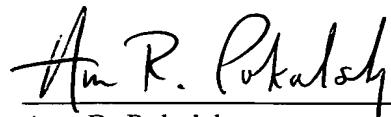
40. U.S. Patent No. 6,087,175 to Peter C. L. John, et al., issued July 11, 2000.

An Information Disclosure Statement was filed in the parent case, U.S. Serial No. 09/526,597. References 5, 6, 8, 10, 11, 19, 22, 25-28, 31, 33-34, 36, 37, and 38 (listed above), were previously submitted in the parent application, which application is relied upon for an earlier filing date under 35 U.S.C. § 120. In accordance with 37 C.F.R. § 1.98(d), copies of the previously submitted references are not submitted herewith.

Consideration of this Information Disclosure Statement is respectfully requested, since the art provided may be material to the examination of the present invention as defined in 37 C.F.R. § 1.56(a).

Inasmuch as this Information Disclosure Statement is being submitted prior to the issuance of an Official Action on the merits, no fee, certification or petition is required by Applicants.

Respectfully submitted,



Ann R. Pokalsky  
Registration No. 34,697

Date: January 5, 2001

NIXON PEABODY LLP  
990 Stewart Avenue  
Garden City, New York 11530-4838  
Telephone: (516) 832-7572  
Facsimile: (516) 832-7555

ARP/mm

**CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8(a)**

I certify that the attached correspondence is being deposited  
on 1/5/01 with the U.S. Postal Service as first class mail  
under 37 C.F.R. § 1.8 and addressed to:  
Assistant Commissioner for Patents, Washington, D.C. 20231.

  
Maria I. Matos

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. 2283/301	SERIAL NO. 09/574,735
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		APPLICANT Leivan DeVeylder et al.	
(use several sheets if necessary) (PTO-1449 )		FILING DATE May 18, 2000	GROUP ART UNIT 1643

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	5,750,862	5/12/1998	Peter C. L. John, et al.			
	AB	6,087,175	7/11/2000	Peter C. L. John, et al.			
	AC						
	AD						
	AE						
	AF						
	AG						

## FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION IF APPROPRIATE
	AH	WO 99 64599	12/16/99	PCT			
	AI	WO 99 14331	3/25/99	PCT			
	AJ	WO 97 26327 A	7/24/97	PCT			

## OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, Etc.)

	AK	Burssens S., et al. (1998) "The cell cycle in <i>Arabidopsis</i> ", <i>Plant Physiol. Biochem</i> 36(1-2): 9-19. ✓
	AL	Burssens S., et al. (1998) "Identification of novel cell cycle genes in <i>Arabidopsis thaliana</i> ", current abstract <i>Plant Science and Biotechnology in Agriculture</i> 36. ✓
	AM	Chen, J., et al. (1996) "Cyclin-Binding Motifs Are Essential For The Function Of p21 <sup>CIP1</sup> ", <i>Molecular and Cellular Biology</i> 16(9): 4673-4682. ✓
	AN	de Almedia Engler, J., et al. (1999) "Molecular Markers And Cell Cycle Inhibitors Show The Importance Of Cell Cycle Progression In Nematode-Induced Galls And Syncytia", <i>Plant Cell</i> 11: 793-808. ✓
	AO	Doerner, P., et al. (April 11, 1996) "Control of root growth and development by cyclin expression", <i>Nature</i> 380:520-523. ✓
EXAMINER		DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 6.9; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. 2283/301	SERIAL NO. 09/574,735
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		APPLICANT Leivan DeVeylder et al.	JAN 08 2001 JC42 PATENT & TRADEMARK OFFICE
(use several sheets if necessary) (PTO-1449)		FILING DATE May 18, 2000	
			GROUP ART UNIT 1643

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	BA						
	BB						
	BC						
	BD						
	BE						
	BF						
	BG						

## FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION IF APPROPRIATE
	BH	WO 00 60087	10/12/00	PCT			
	BI	WO 96 31534 A	10/10/96	PCT			
	BJ	WO 92 09685	6/11/92	PCT			

## OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, Etc.)

	BK		Doonan, J., (1996) "Plant Growth: Roots In The Cell Cycle", <i>Current Biology</i> 6(7): 788-789.		
	BL		Forsburg, Susan L. (2000) "Themes and variations: the First Salk Institute Cell Cycle Meeting, 18-22 June 1999", <i>Biochimica et Biophysica Acta</i> 1470: R13-R16.		
	BM		Fountain, M.D., (November 27, 1997) "Chenopodium rubrum G1 cyclin-dependent kinase inhibitor mRNA, complete cds."		
			EMBL Accession No. AJ002173.		
	BN		Hemerly A.S., et al. (1999) "Cell Cycle Control And Plant Morphogenesis: Is There An Essential Link?" <i>Bioessays</i> 21: 29-37.		
	BO		Hemerly, A., et al., (December 1993) "cdc2a Expression in Arabidopsis is Linked with Competence for Cell Division", <i>The Plant Cell</i> 5: 1711-1723.		
EXAMINER			DATE CONSIDERED		
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 6.9; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.					

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. 2283/301	SERIAL NO. 09/574,735
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		APPLICANT Leivan DeVeylder et al.	JAN 08 2001 JCAS PATENT & TRADEMARK OFFICE
(use several sheets if necessary) (PTO-1449 )		FILING DATE May 18, 2000	
			GROUP ART UNIT 1643

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	CA						
	CB						
	CC						
	CD						
	CE						
	CF						
	CG						

## FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION IF APPROPRIATE
	CH	WO 97 26327 A	7/24/97	PCT			
	CI	WO 97 20842 A	10/10/96	PCT			
	CJ	WO 97 16447 A	5/9/97	PCT			

## OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, Etc.)

	CK		Hemerly et al. (1995) "Dominant Negative Mutants of the CDC2 Kinase Uncouple Cell Division From Iterative Plant Development", <i>Embo Journal</i> 14(16): 3925-3936.		
			Hinds, Phil (1999) "The cell cycle Cold Spring Harbor, 20-24 May 1998", <i>Biochimica et Biophysica Acta</i> 1423:R63-R67.		
	CM		Huntley, Rachel P., et al. (1999) "The Plant Cell Cycle", <i>Plant Biology</i> 2: 447-453.		
			Inze, D., et al. (1999) "Trends In Plant Cell Cycle Research", <i>Plant Cell</i> 11(1): 1-4.		
	CN		Jacqmarc, A., et al. (1999) "Expression Of CKS1At In <i>Arabidopsis thaliana</i> Indicates A Role For The Protein In Both The Mitotic And The Endoreduplication Cycle", <i>Planta</i> 207: 496-504.		
EXAMINER			DATE CONSIDERED		
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 6.9; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.					

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. 2283/301	SERIAL NO. 09/574,735	RECEIVED
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		APPLICANT Leivan DeVeylder et al.	JAN 08 2001	
(use several sheets if necessary) (PTO-1449)		FILING DATE May 18, 2000	JAN 10 2001	
			GROUP ART 1643	TECH CENTER 1600/2900

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	DA						
	DB						
	DC						
	DD						
	DE						
	DF						
	DG						

## FOREIGN PATENT DOCUMENTS

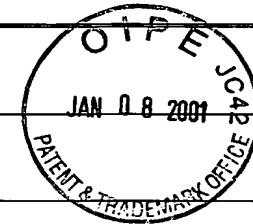
	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION IF APPROPRIATE
	DH	WO 93 15213 A	8/5/93	PCT			
	DI						
	DJ						

## OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, Etc.)

	DK		LaBaer, J., et al. (1997) "New Functional Activities For The p21 Family of CDK Inhibitors", <i>Genes &amp; Development</i> 11: 847-862.
	DL		Lui, H., et al. (2000) "The Arabidopsis Cdc2a-Interacting Protein ICK2 Is Structurally Related To ICK1 and is a potent inhibitor of cyclin-dependent kinase activity in vitro", <i>Plant Journal</i> 21(4): 379-385.
	DM		Mironov, V., et al. (1999) "Cyclin-Dependent Kinases And Cell Division In Plants-The Nexus", <i>Plant Cell</i> . 11: 509-522.
	DN		Nakamura Y. (April 14, 1998) "Arabidopsis thaliana genomic DNA, chromosome 5, TAC clone:K24G6" EMBL Accession No. AB012242.
	DO		Nakayama, K. et al. (1998) "Cip/Kip Cyclin-Dependent Kinase Inhibitors: Brakes Of The Cell Cycle Engine During Development", <i>Bioessays</i> 20: 1020-1029.
EXAMINER			DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 6.9; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. 2283/301	SERIAL NO. 09/574,735
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		APPLICANT Leivan DeVeylder et al.	
(use several sheets if necessary) (PTO-1449 )		FILING DATE May 18, 2000	GROUP ART UNIT 1643



## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	EA						
	EB						
	EC						
	ED						
	EE						
	EF						
	EG						

## FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION IF APPROPRIATE
	EH						
	EI						
	EJ						

## OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, Etc.)

EK	REF	Niebel, A., et al. (1996) "Induction of cdc2a and cyc1 At Expression in <i>Arabidopsis thaliana</i> During Early Phases of Nematode-Induced Feeding Cell Formation", <i>Plant Journal</i> 10(6): 1037-1043.	
		Planchais, S., (1997) "Roscovitine, a novel cyclin-dependent kinase inhibitor, characterizes restriction point and G2/M transition in tobacco By-2 cell suspension", <i>The Plant Journal</i> 12(1):191-202.	
EM	REF	Pyke, K, et al. (1999) "Cellular Differentiation and Leaf Morphogenesis in <i>Arabidopsis</i> ", <i>Critical Reviews in Plant Sciences</i> 18(4): 527-546.	
		Reed, S. I. (1996) "G1/S Regulatory Mechanisms From Yeast To Man", <i>Prog. Cell Cycle Res.</i> 2: 15-27.	
EO	REF	Veylder De, et al. (1997) "The Arabidopsis CKS1 At Protein Binds The Cyclin-Dependent Kinases CDC2AAT and CDC2BAT", <i>Febs Letters</i> 412 no. 3 and 4: 446-452.	
EXAMINER			
DATE CONSIDERED			

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 6.9; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. 2283/301	SERIAL NO. 09/574,735
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		APPLICANT Leivan DeVeylder et al.	
(use several sheets if necessary) (PTO-1449 )		FILING DATE May 18, 2000	GROUP ART UNIT 1643



## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	FA						
	FB						
	FC						
	FD						
	FE						
	FF						
	FG						

## FOREIGN PATENT DOCUMENTS

	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION IF APPROPRIATE
	FH						
	FI						
	FJ						

## OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, Etc.)

FK	Wang, H., et al. (1997) "A Plant Cyclin-Dependent Kinase Inhibitor Gene", <i>Nature</i> 386: 451-452.	
FL	Wang, H., et al. (1998) "ICK1, A Cyclin-Dependent Protein Kinase Inhibitor From <i>Arabidopsis thaliana</i> Interacts With Both Cdc2a and CycD3, And Its Expression Is Induced By Abscisic Acid", <i>Plant Journal</i> 15(4): 501-510.	
FM	Wang H., et al. (1997) "Arabidopsis thaliana cyclin-dependent kinase inhibitor protein (ICK1) mRNA, complete cds", EMBL Accession No. U94772, April 29, 1997.	
FN		
FO		
EXAMINER		
DATE CONSIDERED		

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 6.9; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.